

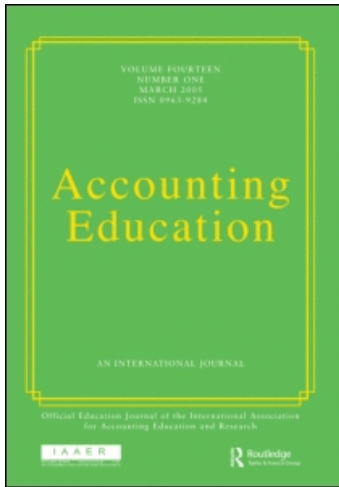
This article was downloaded by: [Chiang, Bea]

On: 9 December 2008

Access details: Access Details: [subscription number 906444440]

Publisher Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



## Accounting Education

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title~content=t713683833>

### Integrating a Service-learning Project into Management Accounting Coursework—A Sharing of Implementation Experience and Lessons Learned

Bea Chiang <sup>a</sup>

<sup>a</sup> The College of New Jersey, USA

Online Publication Date: 01 December 2008

**To cite this Article** Chiang, Bea(2008)'Integrating a Service-learning Project into Management Accounting Coursework—A Sharing of Implementation Experience and Lessons Learned',Accounting Education,17:4,431 — 445

**To link to this Article:** DOI: 10.1080/09639280802436657

**URL:** <http://dx.doi.org/10.1080/09639280802436657>

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.informaworld.com/terms-and-conditions-of-access.pdf>

This article may be used for research, teaching and private study purposes. Any substantial or systematic reproduction, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

# Integrating a Service-learning Project into Management Accounting Coursework—A Sharing of Implementation Experience and Lessons Learned

BEA CHIANG

*The College of New Jersey, USA*

Received: November 2006

Revised: January 2008; April 2008

Accepted: April 2008

**ABSTRACT** *‘Service-learning’ is a pedagogical technique that supplements formal classroom education with real life experiences. An educator may integrate work projects from actual business settings into a course to help students learn and practice concepts from assignments and discussions while bridging accounting concepts and real life. The purpose of this paper is to explain the experience of incorporating service-learning projects into management accounting classes and to share insights learned from the implementation processes. Specifically, this paper describes two examples of the type of service-learning projects that can be integrated into a management accounting class; class responses to these projects; feedback from the community agencies involved in the projects; and finally, the possible constraints of such projects – with suggestions for overcoming such constraints.*

**KEY WORDS:** Service learning, accounting education, management accounting, community research project, project implementation

## Introduction

The recent popularity of integrating service-learning activities into the classroom is derived, in part, from theories of how people learn best and, in part, from the changes needed to make higher education more effective. ‘Service-learning’ (SL) is an instructional technique that supplements formal classroom education with real-life experiences. It provides students with a context to reinforce the application of technical knowledge to understand real-world problems (Rama, 1998). It is a form of active learning that involves

---

*Correspondence Address:* Bea Chiang, School of Business, The College of New Jersey, P.O. Box 7718, Ewing, NJ 08628-0718, USA. Email: bchiang@tcnj.edu

service to the community ranging from a form of 'day-long service' in the community to well-integrated programs in which students spend multiple semesters in a connected series of courses linked to projects in the community (Eyler and Giles, 1999).

Several researchers have documented the learning effect of integrating real-life activities into coursework. Rama, Ravenscroft, Wolcott and Zlotkowski (2000) provide a summary of research on student academic and personal outcomes of SL. The summary shows that most of the research suggests a positive effect of SL on learning outcomes. Astin and Sax (1998) assess how undergraduate students are affected by service participation in terms of civic responsibility, educational attainment and life skills. They find that participation in service activities during the undergraduate years has positive effects on all the learning outcomes. In the business area, service learning is found to improve leadership development (Friedman, 1996) and communication skills (Tucker and McCarthy, 1998; Tucker, McCarthy, Hoxmeier and Lenk 1998) as well as social responsibility (Kolenko, Porter, Wheatley and Colby, 1996). Specifically in accounting, Strupeck and Whitten (2004) discuss the experiences of two US universities' SL opportunities utilizing Volunteer Income Tax Assistance (VITA) programs and report positive learning outcomes. Similarly, Rose, Rose and Norman (2005) report favourable results of an experiment in an accounting information system course using SL, and Tschopp (2004) illustrates an experimental process of a non-course-based requirement to design a business plan for a community project using American Institute of Certified Public Accountants (AICPA) core competencies (AICPA, 1998). Overall, the results of the published studies indicate that SL applications improve the achievement of the course learning objectives.

However, a general review of SL publications conducted by Andrews (2007) indicates that SL is not integrated evenly throughout the business curriculum. There are relatively fewer SL applications in accounting curricula, and the majority of SL implementations are optional assignments instead of being course-based. Furthermore, Andrews comments that SL literature in accounting education indicates that faculty feel less free to experiment with alternative learning strategies when course content is closely tied to a national examination. Nevertheless, SL integration should be encouraged because it can be a worthwhile and powerful learning experience when educators determine in which course SL best applies and how it should be implemented.

Although prior research has provided concepts, models and implementation information to incorporate SL projects into accounting classes, those models and implementations have not addressed managerial accounting. The purpose of this paper is to share the implementation experience and lessons learned from incorporating SL projects specifically into managerial accounting courses. The discussion of the implementation process is accompanied by a series of designed reflective assignments, which are based on the theory of reflection. In the remaining sections of the paper, the literature of reflection is reviewed, strategies for designing project exercises are discussed, and examples of specific project exercises are presented. The feedback from students and community agencies involved is summarised and is followed by suggestions for those considering the adoption of community SL projects to enrich the traditional classroom learning experience.

### **Reflection Process and Reflective Activities**

Since a real-life project is more complex than course practice exercises, students often cannot immediately apply the principles or rules learned from textbooks and lectures. Therefore, to achieve intended learning outcomes, reflection is considered a necessary component of an effective service-learning program (Giles, Honnet and Migliore,

1991). Giles and Schmiede (1996) suggest that structured reflection can help students make meaningful connection between their service experience and course contents.

Reflection is a mental process, which applied to the act of learning, challenges students to use critical thinking to examine presented information, question its validity, and draw conclusions based on the resulting ideas. This ongoing process allows the students to narrow possible solutions and eventually form a conclusion. The result of this struggle is a better understanding of the concept (Ewell, 1997). In addition, reflective practice entails adopting a critical perspective about the reasons for and consequences of what we do in different contexts. By focusing on the *why* rather than the *how*, this process of self-observation and self-review enables people to evaluate past activities and to redefine their future actions. Reflective practice, as argues by Schön (1983; 1987) is the core of life-long learning modes.

The structured reflection process can be facilitated by reading, writing, doing and telling (Eyler *et al.*, 1996). Typical reflective activities include classroom presentations, literature research, journal logs, structured assignments, and group discussions. Reflection can be conducted before, during and after the SL project. Reflection before the project can be used to prepare students for the SL experience. For example, reflective assignments may include introducing community members to students, assigning background reading materials, writing a proposal, lecturing on related concepts and principles, and gathering relevant information for the project. During the SL project, faculty can use reflective activities that promote students' learning and provide feedback to the faculty. At the same time, the faculty provides assessment and support as needed to enhance learning. Reflection after the completion of the project provides an opportunity for students to evaluate their SL experience. Students have an opportunity to think back on how they learned course concepts from their participation in the project and how the project may affect the way they identify problems, integrate and digest information, and communicate with group members. Reflection at this stage can also involve writing project results, organizing presentations to community members, and answering surveys intended to measure outcomes.

Faculty play a key role in structuring the reflection process and must carefully design reflection components based on specific SL characteristics, individual student's characteristics, and relevant course content. Carefully designed reflective activities provide opportunities for students to reflect critically on their service experience. This paper shares the experience of implementing several reflective assignments along with a service-learning project to enhance the overall learning experience. Specifically, the paper demonstrates two types of service-learning projects that can be integrated into a management accounting class; class responses to these projects; feedback from the community agencies involved in these projects; and finally, the possible constraints on such projects—with suggestions for overcoming such constraints.

## **Strategies to Integrate Community Projects into Management Accounting Coursework**

### *1. Identifying and Designing an Appropriate Service-learning Project*

Prior to the beginning of an academic semester, a meeting is arranged with a local agency to discuss the possibility of developing a project. Generally, three areas are discussed in such a meeting. First, the instructor explains and clarifies the tasks that management accounting students could offer based on a list of several possible accounting tasks (Table 1). The list of possible tasks was developed based on management

**Table 1.** List of possible tasks

---

List of possible tasks that an accounting class can offer.

1. Development and implementation of costing system
    - Develop job costing system or process costing
    - Develop activity-based costing system
    - Develop specific costing system suitable for organizations
    - Improve costing system
    - Costing and pricing issues
    - Estimate costs of certain products/services/projects
    - Pricing analysis
    - Develop standard cost for manufacturing process or service activities
    - Analyse products/services profitability
  2. Budgeting and standard cost
    - Develop process standard cost and rate
    - Develop and revise annual budget
    - Develop overhead application rate
    - Develop transfer prices
    - Investigate variances
  3. Financial reporting and segment reporting
    - Develop financial reporting for specific organization needs
    - Develop segment profitability reporting
    - Develop segment responsibility reporting
    - Improve performance measurement
  4. General business issues and financial analysis
    - Develop business plans
    - Search for external benchmarks and develop internal benchmarks for the organization
    - Analyse financial risk
    - Analyse cost and benefits of a particular project
    - Improve overhead control and management
    - Improve inventory management
- 

accounting disciplines, topics from prior projects, and inputs from students and community agencies. This list is very helpful in identifying potential projects. Sometimes, the agency has a specific problem it would like the class to help resolve. However, most of the time, the agency wants to know what the students could offer. In this exchange, the list helps the instructor and agency find common ground between the management accounting class and local community needs. Second, based on possible accounting tasks that a management accounting class can offer, the agency determines problems or needs for which it could use students' services. Third, the agency and the instructor discuss, clarify and solidify agency expectations regarding quality of project work, liability issues, time constraints, data availability, time commitment, and support from the agency.

(a) *Project context and design.* Once an SL community partner is located, the project must be designed as an integral part of the course, essentially integrated with the course objectives, the reading material, the class discussions, and, of course, the grades. One challenge faced by the instructor is to find a suitable project that fits the accounting and business background of the students. Before undertaking any project, instructors have to ask themselves a question 'Will students have adequate knowledge to complete

the project?' In general, a relatively simple accounting project can be adopted for management accounting classes, which are normally taken by students in their second year of college. An example of such a project is teaching local high school students about budgeting for common living costs. However, projects that require more in-depth financial analysis normally call for knowledge of finance, marketing or management besides accounting. It would be more feasible to implement such projects in higher-level management/cost accounting classes, which students would take in their third year of college because they would have a more general business background to meet the demand of projects. In addition, to make SL manageable, the projects are presumed to be integrated into small classes that have about 25 to 30 students.

After the project is selected and appropriate class level is determined, the instructor will move on to the design and planning stage for the project. The instructor will determine the amount of class time to be devoted to the project, (i.e. when to introduce the community partner to the class and when to present the results of the project to the agency), the expected schedule for completion of project-related assignments, appropriate student group size, and the timing of on-going communication with the agency regarding feasibility, implementation, need and logistics. All of the above design and planning should be tailored to the nature of the project.

*(b) Nature of projects—a community farm project and a WomanSpace project.* Generally, projects can be classified into two broad areas: general financial analysis and analysis of a specifically focused issue. As an example of a general financial analysis project, students conducted a strategic financial analysis for a community farm. The farm provides fresh produce to low-income neighbourhoods and to emergency food providers in the local area. This farm, however, has been running at a loss for many years and relies on a subsidy from the local government. The organization can no longer afford to operate at a deficit. In order to maintain the farm, the organization needs a more cost-efficient operation to maximize resources. The organization asked the students to provide a general business analysis and recommendations for the farm operation to improve the situation.

The WomanSpace project is an example of a project focused on a particular issue. WomanSpace runs a number of programs for victims of domestic violence. Domestic Violence Response Teams attend to various domestic issues. These teams include volunteers who join police officers to respond to calls. They provide services such as counselling and advocacy assistance. State legislation now requires each town to establish such teams. To put together a team, WomanSpace must recruit volunteers, provide 40 h of training, and follow up with support. Yet the program only receives \$5000 in New Jersey funding. While realizing that this amount does not cover all of the costs incurred, WomanSpace still has no idea exactly how much it costs to form a team. Therefore, WomanSpace asked the management accounting class to identify all cost components and estimate the total costs of forming a team. WomanSpace could then use this information to seek funding.

Students are directed to form their own groups to conduct the project. Group size ranges from three to five people. Tasks for each group depend on the nature of the project. The entire project is expected to take a complete semester to finish.

For the WomanSpace project, each group worked on the same tasks: to analyse existing costs and to estimate the 'true' total cost of forming a supporting team. At the end of the semester, the two best reports were selected as final products for the agency.

Alternatively, the community farm project required students to conduct a strategic analysis that covered several aspects of the business. Different tasks were assigned to

each group: cost analysis, operations efficiency analysis, marketing issues and fundraising issues. The instructor then combined the results from each group for the final report.

## *2. Reflective Activities*

*(a) Reflection before the project.* The community farm and WomanSpace projects are assigned to two different sections of a three-credit-hour undergraduate junior management accounting class (one section conducted the community farm project and the other section handled WomanSpace). Next, the instructor shares the details of the project with students. During the first week of the semester, information regarding the project, such as the annual report of the agency and related literature, are distributed to students as reading assignments. A representative from the agency may be invited to present general project information to the class. Around the third week, a presenter from the local agency comes to interact with students, meeting in smaller groups. This interaction gives students an understanding of the project and their client's needs. A series of assignments are then distributed to students (see examples in Appendix A). The content of the assignments depends on the nature of the project. The following discussion presents four examples of reflective assignments for students to do at different stages of the project.

### *(b) Reflection during the project.* **The First Assignment: Research Proposal/Research Plan**

The first assignment is given after students have a general understanding of the community organization and the project. The purpose of this assignment is to get students started by asking them to think through the project, describe the research plan, and suggest how they might approach the project. Students are asked questions such as, 'What is your research plan for approaching this project? What additional information do you need to accomplish your plan?' This assignment allows students to identify issues, gather facts, research related information, and brainstorm solutions to problems.

### **The Second Assignment: Feedback, Communication and Interaction**

The instructor collects, reviews, and summarizes the first assignment. This information is then shared with the agency to solicit feedback. Representatives from the agency then visit the class again. To prepare for this visit, the agency's written feedback is distributed to students. Then, for the second assignment, students identify all the questions they have for the agency's second visit. These questions are shared with the agency before the actual visit so that feedback from the agency and questions from the students are shared and communicated ahead of time.

### **The Third Assignment: Research and Results**

The third assignment requires students to start working on the project and to write up the results. This assignment may involve collecting, organizing and analyzing relevant data and other information. Communication is on going between students and the agency throughout the semester.

### **The Fourth Assignment: Final Report and Presentation**

As the fourth assignment, students write a memo and executive summary to include with the final report completed in the third assignment. The guidelines for writing the final

**Table 2.** Time frame, project stages and required skills

Project stage	Series of assignments	Skills required	Time frame (for 15 weeks of accounting class)
General information and introduction	Group meeting, project information distribution		Week 1
Research Plan	First assignment	Research skills Problem-solving Critical thinking Issues identification Communication skills Team skills Writing skills Time management	Weeks 2–4
Communication and feedback	Second assignment	Interpersonal skills Communication skills Team skills Time management Writing skills	Weeks 5–6
Research and results	Third assignment	Team skills Critical thinking Problem-solving Communication skills Writing skills Time management	Weeks 7–12
Final report and presentation	Fourth assignment	Communication skills Professional demeanour Team skills Writing skills Time management	Weeks 13–14

report and the elements to be included in the report are specified in the descriptions of the fourth assignment (see Appendix A). Students then prepare a professional and polished presentation of their results to the class and the client.

The project time frame is based on a semester of 15 weeks. Table 2 summarizes the time frame for each stage of the project and the skills required for each stage.

### 3. Feedback from the Students and Community Agencies

*Feedback from the students.* A questionnaire (Appendix B) was given to students at the end of the semester to obtain feedback on the project. A total of 103 completed surveys were received (a class of 55 students conducted the community farm project and a class of 48 students conducted the WomanSpace project).



**Table 3.** Summary of student and community agency feedback survey

Student feedback	Community farm project	WomanSpace project
Survey question no.1	9.1 <sup>a</sup>	9.6
2	6.5	8.5
3	7.4	8.5
4	7.5	8.1
8	7.1	8.8
Community feedback		
Survey question no. 1	8.8	8.9

<sup>a</sup>Mean of responses on the 10-point Likert scale.

In the questionnaire (see Appendix B), students were asked to indicate, on a 10-point Likert scale, how much the community project helped them to understand certain accounting concepts, how much the community project helped them apply accounting concepts in the real world, and how interested they were in the project. Students then responded to three open-ended questions: (1) What did you like most about this project? (2) What did you like least about this project? (3) What did you learn from participating in this project? The last question in the survey asked students to indicate on a 10-point Likert scale if they would recommend the same type of project for use in future accounting classes.

In general, students' responses to the project were positive (see Table 3). They appreciated the opportunity to conduct a real-life accounting project and found that the project was an interesting assignment for the course. For the community farm project, students' responses had a mean of 7.5, while the mean for the WomanSpace project was 8.1. Responses to the question about understanding the role of accounting in the financial analysis had means of 9.1 and 9.6 respectively. Similarly, most of the students found that the community project helped them to understand accounting concepts as shown by means of 6.5 from the community farm project and 8.5 from the WomanSpace project. Means of 7.4 from the community farm project and 8.5 from the WomanSpace project suggested that students also believed the project helped them apply accounting concepts to the real world.

Some students pointed out that the parts of the project they liked the most were the brainstorming process for solutions, the field trip to the project site, and interaction with the agency. For example, one student stated 'It is so important to be out in the real world. Theories are just that, theories. Applying them to real life is essential to having a deep understanding of a concept.' The part of the project students reported liking the least was a lack of sufficient data for analysis, limited time and communication with the agency, the extra course work due to the project and the time constraints for completing the project: 'Sometimes it is very difficult to come up with good project results without complete information from the community agency.' For additional student quotations, see Table 4.

Despite some expressed frustration, students did recommend use of the same type of project for future accounting classes, shown by a mean of 7.1 from the community farm project and 8.8 from the WomanSpace project. It is interesting to note that the students' response to the WomanSpace project was consistently more positive than the response to the community farm project. This may be because the WomanSpace project required a more focused outcome—a detailed cost analysis—and students perceived the project as being more accounting-related.

**Table 4.** Sample quotations from open-ended questions**Student Feedback**

What did you like the most about this project?

'I can't believe that we had a field trip for accounting class, I enjoyed this project very much!'

'Dealing with real life stuff is absolutely cool!'

'It is so important to be out in the real world. Theories are just that, theories. Applying them to real life is essential to having a deep understanding of a concept.'

'My experience was wonderful! I was given a lot of responsibility and very positive feedback.'

'I enjoyed the process of brainstorming solutions with my group members, it was a great learning experience to me!'

What did you like least about this project?

'Working under given accounting course load with expected due date for project results creates unnecessary pressure for the class.'

'Sometimes it is very difficult to come up with good project results without complete information from the community agency.'

'Need more time, more information, more support from the agency to create good product for them!'

'Although it is a good learning tool to involve real-life project in accounting class, the extra work from the project did create some pressure for the class.'

What have you learned from participating in this project?

'Thank you for providing me this opportunity. This experience increases my confidence in working with team members and people outside the classroom in the future. If the school can provide more opportunities and cooperate with other social associations to hold similar activities, it will help students to understand themselves and get confidence better.'

'I can't believe that in only 4 months, I can conduct a general financial analysis like a consultant. It was so cool.'

'The project has given me the opportunity to give theory value and significance outside of the classroom. This is one of the most important lessons to be learned in life.'

'The project got us involved in the real world. It let us do things that were important and let us see that what we were learning was important to solving real-world problems.'

**Feedback from the Community Agency**

Surveys were also sent to the agencies to obtain their feedback after the classes completed the projects. The comments from the agencies were very helpful for planning, identifying potential obstacles and making necessary adjustments for implementing future projects. Appendix C presents a sample questionnaire sent to the organizations involved in the projects. One question asked if they were satisfied with the results that the class provided. Both community organizations appreciated the efforts and insights that students provided as shown by a mean of 8.8 from the community farm agency and 8.9 from WomanSpace on a 10-point Likert scale.

All other survey questions were open-ended questions for each agency's comments: (1) How will the results we provided benefit your organization? (2) What kinds of decisions can you or have you made because of the project? (3) What other information, if any, were you hoping to obtain because of this project? and (4) What suggestions would you offer concerning the results we provided? The director from the community farm indicated that, to increase farm revenues, they considered adopting the marketing strategies, product mix options and funding opportunities that the students had suggested. The organization particularly appreciated the in-depth cost analysis that helped them to focus on target areas for controlling costs. The director of WomanSpace indicated that

they would include the analysis and cost reports from the project in their state funding proposal.

Both organizations also provided suggestions regarding the projects. They suggested that the data collection and communication processes could be more time-efficient. For example, due to their busy schedules, they were unable to answer all the questions raised by students in a timely manner. Moreover, some key questions (such as employees' salaries and other sensitive financial information) that cannot be answered by agency staff should be coordinated by one individual to bring to a meeting with the agency director instead of allowing students to call or e-mail various agency personnel directly. The director of WomanSpace also suggested that some general project data probably could be compiled and collected before the start of project. It was difficult to have to rush, in order to complete so many tasks within a one-semester time frame; these tasks included conducting research, meeting with the agency, visiting the project site, collecting data, analyzing data, writing results and conducting a presentation.

### **Constraints and Lessons Learned**

For purposes of illustration, this paper uses the community farm project and WomanSpace as examples of typical accounting-related service-learning projects. When each project was finished, comments and feedback were collected from both students and the community agencies to see whether any concerns should be addressed and improvements made for the implementation of future projects.

Four years of working with students involved in nine community projects leads this researcher to share some lessons learned in order to provide constructive suggestions to faculty who might like to consider the possibility of adopting a community project. Although the nine projects involved different agencies and accomplished different accounting tasks, the nature of the projects is similar to both the community farm project (general financial analysis) and the WomanSpace project (specific focused issue). Several constraints experienced may preclude the integration of community projects into all accounting classes; fortunately, some of these can be alleviated by proper planning.

### **Project Opportunity**

The first challenge faced by faculty who wish to incorporate a service-learning project into an accounting class is finding an appropriate project opportunity. Some projects can be developed through existing campus-based initiatives in the USA, such as the Campus Community Partnership or Service Learning Office, which act as a liaison between campus faculty and local organizations; or the Small Business Center, which provides business consulting or education services to local small business. Other projects can be conducted with agencies or organizations with which faculty have previously worked.

Some schools may not have a Campus Community Partnership or similar initiative to connect the school with the local community. Bowlin (2001) suggests contacting local economic development councils and chambers of commerce, advertising class accomplishments in the local community newspaper, and obtaining organization information from school career centres. Student organizations may also help solicit projects from the surrounding community. There are several resources in the USA that provide great channels to search for project opportunities such as Community Connection and Campus Compact, the Corporation for National and Community Service, and the National Service Learning Clearinghouse. Additionally, by continuing to foster relationships

established with clients who have previously utilized accounting class services, and by increasing contact with other local organizations, the faculty may be able to provide more opportunities to participate in developing projects.

### **Project Arrangement and Time Constraints**

Time constraints can pose a serious challenge to conducting a project throughout the semester. For the community farm project, each group worked on a specific task, and then the results of each group were combined as a final product. The major benefit of this approach is that each group had a defined task on which to focus their work. However, each group was not able to see the larger picture of the entire project. One way to overcome this problem is to have each group offer a periodic update (5–10 min oral report) on their progress. An alternative approach would be to ask each group to submit progress reports periodically and circulate the reports among the groups. Feedback on these reports can be routed directly to the target group. With current internet-based instruction facilities, e.g. class chat room, class bulletin board; and e-mail discussion lists, cross-group discussion can be facilitated and the faculty should encourage, monitor and provide support to the discussion. This is particularly essential for a business project for which each group's functional tasks are interrelated (cost, profit, marketing and budgeting). Students need to have ongoing communication among teams in order to achieve complete and relevant solutions.

Another alternative approach is to assign a whole project (rather than discrete tasks) to each group, which then conducts all related analyses instead of just one part of the project. Under this approach, every group works on the same set of tasks. One benefit of this approach is that the instructor has more final analyses from which to select the best results to present to the agency. However, the project may be too large to complete within the time frame of a single semester. There are several ways to handle this issue. One possible solution is to have different sets of teams continue the project in subsequent semesters. This approach requires retraining the subsequent new teams each semester, and the benefit to the community agency may be diminished by the time and effort required to accommodate this loss of continuity.

Another approach is to allow students to continue one project over multiple courses. The difficulty of this approach is that it may not be easy to find an appropriate project that is applicable across multiple courses. One alternative is to allow students to continue a project through independent study, work-study or the activities of student organizations.

### **Agency Involvement**

Lack of agency involvement or incomplete data is another challenge in the process of conducting the project. The burden of handling trivial issues and dealing with excessive questions from students sometimes causes an agency to hesitate to participate actively in the project. The involvement and support of agency staff could be improved by carefully designing a working process. One of the objectives of designing a series of assignments is to involve agency staff and increase communication. Finding a student or using a teaching assistant for project liaison to coordinate and summarize all work that flows between the agency and students will help overcome this difficulty. All work that involves questions for the agency or requires feedback from the agency should be organized and summarized by the teaching assistant for efficiency. Coordination and design increases interaction between students and the agency and reduces the burden on the agency to handle

individual questions, thus encouraging the agency's involvement. Support and involvement by the agency is a crucial factor in determining the quality of project results.

Another point of contention is that the difficulty of incorporating a community project into an already tightly scheduled accounting class tends to discourage accounting faculty. Generally, integrating a community project into a course requires one to three class periods (90 min for each class) to allow for inviting an agency representative to come to class and introduce the project; feedback and interaction with students; and student presentations. Much of the work related to the project is actually done by students outside of class; for example, background reading and the series of project-related assignments. Throughout the semester, the project can also often be used as a real example to illustrate course topics as they are covered. However, much faculty time is still devoted to planning, developing, designing and coordinating the project. It is essential for the department chair or other administrators to encourage the involvement of faculty in this type of project by recognizing—for purposes of tenure, promotion or other performance evaluation—the effort reflected by this kind of pedagogical practice.

The problem of incomplete data from the participating agency may be another impediment to smooth progress, but this situation provides a valuable learning experience for the student. Sometimes lack of data or missing information occurs in real life and makes it difficult to accomplish a goal. The instructor must ask students to utilize their best judgment and accounting skills to resolve this problem and to provide suggestions for dealing with missing information.

## Conclusions

Facing the complexity of the accounting profession and business environment, accounting educators should emphasize lifelong learning as an important component in the education delivery process. Community projects reconnect universities with their communities, and, at the same time, offer learning opportunities that go beyond the classroom. This paper uses the example of two projects that were integrated in management accounting classes to discuss implementation issues, possible constraints and suggestions based on those constraints. Class responses indicate that most of the students appreciate the opportunity to conduct a real-life project and found that the project helped them in understanding accounting concepts. The responses from the agencies involved in the projects show the appreciation of the information they received from the project and commented that they will use the results in several ways to benefit their organization. Although feedback discussion focuses on the two illustrated projects, responses from other projects conducted in other years are similar. The responses from both students and agencies may encourage accounting educators to consider incorporating community projects, and this experimental learning pedagogy can be valuable to accounting education.

## References

- AICPA (1998) CPA Vision Project: Focus on the Horizon, Executive Summary and CPA Vision Project Focus Groups: Public Practice, Industry, and Government CPAs (New York: AICPA).
- Andrews, C. P. (2007) Service learning: Applications and research in business, *Journal of Education for Business*, 83(1), pp. 19–26.
- Astin, A. W. and Sax, L. J. (1998) How undergraduates are affected by service participation, *Journal of College Student Development*, 39(3), pp. 251–263.
- Bowlin, W. (2001) Experiential learning: Benefits for academia and the local community. *Management Accounting Quarterly*, 2(3), 20–27.

- Ewell, P. T. (1997) *Organizing for learning: A point of entry*. National Center for Higher Education Management Systems (NCHEMS). Available at [http://www.intime.uni.edu/model/learning/learn\\_summary.html](http://www.intime.uni.edu/model/learning/learn_summary.html) (accessed 20 April 2008).
- Eyler, J. and Giles, D. E. (1999) *Where's the Learning in Service-Learning?* (San Francisco, CA: Jossey-Bass Publishers).
- Eyler, J. and Giles, Jr, D. E. (1996) *Practitioner's Guide to Reflection in Service-Learning: Student Voices and Reflections (A)* (Nashville, TN: Vanderbilt University).
- Friedman, S. D. (1996) Community involvement projects in Wharton's MBA curriculum, *Journal of Business Ethics*, 15(1), pp. 95–101.
- Giles, D. E. and Schmiede, A. (1996) *A Practitioner's Guide to Reflection in Service-Learning: Student Voices and Reflections* (Nashville, TN: Vanderbilt University).
- Giles, D. E. Jr., Honnet, E. P. and Migliore, S. (Eds) (1991) *Research Agenda for Combining Service and Learning in the 1990s* (Raleigh, NC: National Society for Internships and Experiential Education).
- Kolenko, A., Porter, G., Wheatley, W. and Colby, M. (1996) A critique of service learning projects in management education: Pedagogical foundations, barriers, and guidelines, *Journal of Business Ethics*, 15(1), pp. 133–142.
- Rama, D. V. (1998) *Learning by Doing—Concepts and Models for Service-Learning in Accounting* (Washington D. C.: American Association for Higher Education).
- Rama, D. V., Ravenscroft, S. P., Wolcott, S. K. and Zlotkowski, E. (2000) Service-learning outcomes: Guidelines for educators and researchers, *Issues in Accounting Education*, 15(4), pp. 657–692.
- Rose, J. M., Rose, A. M. and Norman, C. S. (2005) A service-learning course in accounting information systems, *Journal of Information Systems*, 19(2), 145–172.
- Schön, D. (1983) *The Reflective Practitioner* (New York: Basic Books).
- Schön, D. (1987) *Educating the Reflective Practitioner* (San Francisco: Jossey-Bass).
- Strupeck, C. D. and Whitten, D. (2004) Accounting service learning experiences and the IRS volunteer income tax assistance programme: A teaching note, *Accounting Education: an international journal*, 13(1), pp. 101–112.
- Tschopp, D. J. (2004) The Seneca Babcock business plan: A case study in using service learning to meet the AICPA core competencies, *Journal of Education for Business*, 79(5), pp. 261–266.
- Tucker, M. L. and McCarthy, A. M. (1998). Student attitudes toward service-learning: Implications for implementation, *Journal of Management Education*, 23(5), pp. 554–573.
- Tucker, M. L., McCarthy, A. M., Hoxmeier, J. A. and Lenk, M. M. (1998) Community service learning increases communication skills across the business curriculum, *Business Communication Quarterly*, 61(2), pp. 89–100.

## Appendix A Series of Assignments (WomanSpace)

### *Project Assignment No. 1*

Write a general description of your research plan for this project.

Include answers to the following questions:

What information/data would you need to complete this project? How would you obtain that information/data? (For example, use meeting logs to track staff time.) Note: These questions will help you to brainstorm the information needed for estimating costs of forming a team. You may or may not be able to gather the information you need. Nevertheless, when you come up with answers, the availability of information/data should NOT be your main concern.

### *Project Assignment No. 2*

1. Based on your first assignment, SPECIFICALLY identify the following items:
  - (a) cost object
  - (b) cost components/elements associated with processes/activities of forming a crisis response team
2. What is the nature (or pattern) of the cost elements you identified above? (e.g. variable cost)

3. Based on your first assignment and information provided from the agency director, provide a list of data/information that you would need for your project but which was missing from the agency's list. Your inputs will be shared with the agency director.

*Project Assignment No. 3*

1. We are planning to invite the agency director for the second visit. Based on your previous two assignments and the information provided from the agency director, identify the questions you would like to ask in the meeting. (Note: When you hand in this assignment, keep a copy for the meeting as well.)

*Project Assignment No. 4 Final Report (both hard copy and computer file)*

Four items should be included in the final report:

- (1) Memo to the agency director
- (2) Executive summary
- (3) Costs of forming a team—both numbers and descriptions of obtaining the numbers
- (4) Suggestions for the future

Based on the information/data provided by WomanSpace, assign costs to all processes/activities of forming a team. Some cost assignment processes may require judgments, so clearly describe the rationale. (Note: Use Excel to perform any computations, if necessary.)

## Appendix B Questionnaire for Student Feedback

*Project Assessment*

To maintain the objectivity of this survey, your comments will be anonymous. Please DO NOT provide your name on this survey.

To help my understanding and assessment of using a real-life project in the class, please answer the following questions on a Likert scale of 1 to 10:

1. How much did the community project help you to understand the role of accounting in the financial analysis?
 

1	2	3	4	5	6	7	8	9	10
unhelpful									very helpful
2. How much did the community project help you to understand the accounting concepts?
 

1	2	3	4	5	6	7	8	9	10
unhelpful									very helpful
3. How much did the community project help you to apply the accounting concepts in real-life?
 

1	2	3	4	5	6	7	8	9	10
unhelpful									very helpful
4. How interesting did you find the community project?
 

1	2	3	4	5	6	7	8	9	10
boring									very interesting
5. What did you like most about this project?
6. What did you like least about this project?
7. What did you learn from participating in this project?

8. Would you recommend the use of the same type of project in a future cost accounting class?

1 2 3 4 5 6 7 8 9 10  
recommend strongly recommend

Please provide your reason:

### Appendix C Community Survey

Thank you for your participation in the project. I hope the results have benefited your organization. In order to improve the process and assess the outcome, I need your feedback/comments on several aspects of the project. Please take a few minutes to complete the following questions.

Are you satisfied with the information/results we provided?

1 2 3 4 5 6 7 8 9 10  
unsatisfied satisfied

1. Was the project successful for your purpose?  
If so, how so? Please explain.  
If no, why not? Please explain
2. How will the information/results we provided benefit your organization?
3. What kind of decisions can you or have you made as a result?
4. What other information, if any, were you hoping to obtain as a result of this project?
5. What suggestions would you offer concerning the results we provided?
6. What suggestions would you offer concerning the process (i.e. data security and interview process)?